

**Management Advisory Report:
Substantial Work Remains If the
Internal Revenue Service Is to Provide
Refund Status Information on the Internet
by the Beginning of the 2002 Filing Season**

December 2000

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DEPARTMENT OF THE TREASURY
WASHINGTON, D.C. 20220

INSPECTOR GENERAL
for TAX
ADMINISTRATION

December 19, 2000

MEMORANDUM FOR COMMISSIONER DALRYMPLE, WAGE AND INVESTMENT
DIVISION, AND COMMISSIONER KEHOE, SMALL
BUSINESS/SELF-EMPLOYED DIVISION

A handwritten signature in black ink, reading "Pamela J. Gardiner".

FROM: Pamela J. Gardiner
Deputy Inspector General for Audit

SUBJECT: Final Management Advisory Report – Substantial Work Remains
If the Internal Revenue Service Is to Provide Refund Status
Information on the Internet by the Beginning of the 2002 Filing
Season

This report presents our review of the Internal Revenue Service's (IRS) efforts to provide taxpayers with refund status information on the Internet. Our objective was to evaluate the plans and the time frames that the IRS has developed to implement an interactive Internet-based refund status application.

In summary, the IRS has been planning to implement an Internet-based refund status application since 1996 and currently plans to make it available to taxpayers by the beginning of the 2002 Filing Season. However, a significant amount of critical work remains to be completed during the next 13 months. Detailed planning needs to be started immediately to minimize the risk that the IRS will not be able to meet its 2002 target date. To further minimize the risk for delays, the appropriate security requirements need to be included in the design of the refund status application. Also, the development of the application needs to be closely monitored to ensure that milestone dates are being met and that any unforeseen problems or issues can be promptly resolved.

Management's response was due on December 13, 2000. As of December 14, 2000, management had not responded to the draft report.

Copies of this report are being sent to the IRS managers who are affected by the report recommendations. Please contact me at (202) 622-6510 if you have questions, or your staff may call Gordon C. Milbourn III, Associate Inspector General for Audit (Small Business and Corporate Programs), at (202) 622-3837.

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Executive Summary

An area of major concern for the Internal Revenue Service (IRS) is reducing the customer demand for its toll-free telephone services. During each filing season,¹ the IRS' toll-free telephone system is inundated with millions of calls from taxpayers seeking information or assistance. Busy signals, long waiting times, and abandoned calls² are the norm.

Refund inquiries significantly contribute to the demand for IRS toll-free telephone services. During the 2000 Filing Season, the IRS received approximately 44 million telephone calls from taxpayers checking on the status of their individual income tax refunds. These refund inquiries represented almost 62 percent of the calls to the IRS' 4 main toll-free telephone lines. The IRS' costs to handle these refund inquiries were more than \$55.6 million.

The Internet is a low-cost alternative to telephone communication. Approximately 130 million Americans currently have access to the Internet. Nine of the 42 state governments that assess individual income taxes have implemented interactive refund inquiry applications on their Internet web sites.

By diverting refund inquiries to the Internet, the IRS could increase the level of service it provides on the toll-free telephone system by freeing up Customer Service Representatives to answer more tax law and/or tax account-related questions from other taxpayers. Diverting refund inquiries to the Internet could also reduce the IRS' costs by lowering the overall demand for telephone assistance. Our objective was to evaluate the IRS' plans and time frames for developing and implementing an interactive Internet-based refund status application.

Results

The IRS' current plans are to implement an Internet-based refund inquiry application by the beginning of the 2002 Filing Season as part of its overall business systems

¹ The filing season is the period from January through mid-April of each calendar year during which most taxpayers typically file their individual income tax returns.

² Calls are considered "abandoned" when the caller hangs up before reaching an IRS representative.

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modernization efforts. However, while some high-level planning has been accomplished, little detailed design³ work had been completed as of September 2000.

The General Accounting Office stated in a May 2000 Exposure Draft entitled *Information Technology Investment – A Framework for Assessing and Improving Process Maturity* (GAO/AIMD-10.1.23) that:

During the control phase the organization ensures that, as projects develop and as investment costs rise, the project is continuing to meet mission needs at the expected levels of cost and risk. If the project is not meeting expectations or if problems have arisen, steps are quickly taken to address the deficiencies.

The IRS needs to ensure that its Internet Refund Inquiry Project is designed and developed so that sufficient time is available to ensure the system meets all requirements and is completed on time and within budget.

Significant Efforts Are Needed to Ensure That an Internet Web Site Refund Status Application Is Available by the Beginning of the 2002 Filing Season

The IRS' attempts to modernize its complex computer systems historically have been delayed by various management and technical problems. The IRS has been planning to implement an Internet-based refund status application since 1996 and currently intends to have it available by the 2002 Filing Season as part of its overall business systems modernization efforts. While some general planning and analysis had been accomplished as of September 2000, little detailed design and development work had been started.

The IRS must define and complete a substantial amount of critical design requirements and development work in the 13 months that remain before the start of the 2002 Filing Season. Some of the development tasks that remain include:

- Analyzing and defining the business requirements and functional requirements of the refund application.
- Ensuring that the application meets all security and privacy requirements.
- Procuring any hardware, software, or contract services that are needed.

³ The design stage translates requirements into a blueprint of the processing functions that the system will perform to meet user needs. Details concerning system access controls, business and processing control procedures, and auditability requirements are incorporated in this stage of the system development life cycle.

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- Integrating/interfacing the web application with the modernized or legacy computer systems.
- Developing a risk management plan that identifies and prioritizes risks and details the methods for controlling the risks.
- Designing, programming, and testing the web application.

Summary of Recommendations

Detailed design planning and development actions need to be started immediately to minimize the risk that the Internet-based refund application will be delayed beyond the 2002 target date. To further minimize the risk of delays, the appropriate security requirements need to be designed into the refund status application, and the development of the application needs to be closely monitored so that any unforeseen problems or issues can be promptly resolved.

Management's Response: Management's response was due on December 13, 2000. As of December 14, 2000, management had not responded to the draft report.

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Objective and Scope

We evaluated the IRS' plans for providing taxpayers with refund status information on the Internet.

Our objective was to evaluate the plans and time frames that the Internal Revenue Service (IRS) has developed to implement an interactive Internet-based refund status application. To accomplish this objective, we:

- Analyzed the level of service provided and the costs incurred by the existing method of providing taxpayers with refund status information almost exclusively by telephone.
- Reviewed data to determine the public's acceptance of electronic applications.
- Visited two state governments that have already developed and implemented an Internet application for providing taxpayers with state income tax refund information.
- Interviewed the management officials who are responsible for developing and implementing the IRS' planned Internet-based refund inquiry application.
- Reviewed available documentation supporting the IRS' planned system.

This review supports one of the Fiscal Year (FY) 2000 emphasis areas of the Treasury Inspector General for Tax Administration (TIGTA) to evaluate whether the IRS is providing quality customer service operations. We conducted the review between June and September 2000 in accordance with the President's Council on Integrity and Efficiency's *Quality Standards for Inspections*. Our review work was performed at the IRS' Customer Service headquarters office and at the state tax offices in Sacramento, California, and Albany, New York.

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Details of our objective, scope, and methodology are presented in Appendix I. Major contributors to this report are listed in Appendix II.

Background

An area of major concern for the IRS is reducing the customer demand for its toll-free telephone services. During each filing season,¹ the IRS' toll-free telephone system is inundated with millions of calls from taxpayers seeking information or assistance. Busy signals, long waiting times, and abandoned calls² are the norm.

The IRS spent more than \$55.6 million to answer refund inquiries by telephone during the 2000 Filing Season.

The IRS spent more than \$55.6 million to handle the approximately 44 million refund inquiries received on its 4 main toll-free telephone lines during the 2000 Filing Season. Because the IRS telephone systems were inundated with more than 71 million calls during this period (of which these refund inquiries represented almost 62 percent), millions of other taxpayers received busy signals or simply hung up when they chose not to wait for assistance. The IRS Customer Account Services functions plan to improve the level of service and made some progress during 1999 and 2000. However, a significant gap in service remains.

The Internet is a low-cost alternative to telephone communication. Approximately 130 million Americans currently have access to the Internet. So while Internet access is not universal, it is very widespread. The IRS already has a presence on the Internet with its web site called *The Digital Daily*, which was visited nearly 1 billion times during the 2000 Filing Season.

¹ The filing season is the period from January through mid-April of each calendar year during which most taxpayers typically file their individual income tax returns.

² Calls are considered "abandoned" when the caller hangs up before reaching an IRS representative.

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Nine state governments are already using the Internet to provide taxpayers with refund status information.

Other levels of government are using the Internet to improve and expand service to citizens. Nine of the 42 state governments that assess individual income taxes already offer refund status information to taxpayers over the Internet.

By diverting refund inquiries to the Internet, the IRS could increase the level of service it provides on the toll-free telephone system by freeing up its Customer Service Representatives to answer more tax law and tax account-related questions from other taxpayers. An Internet-based refund application could also reduce the IRS' costs by lowering the overall demand for telephone assistance.

Results

The IRS plans to implement an Internet-based refund inquiry application by the beginning of the 2002 Filing Season. While some high-level planning has been accomplished, little detailed design³ and development work had been completed as of September 2000.

The IRS risks not being able to provide taxpayers with refund status information on the Internet by the beginning of the 2002 Filing Season unless detailed design planning begins immediately. Significant efforts are needed to design, develop, and test the system prior to implementation. The General Accounting Office (GAO) recognizes the IRS as being a high-risk organization when it comes to modernizing information systems. To keep this project on schedule and within budget, the Commissioner, Wage and Investment Division, needs to work with the Chief Information Officer to closely monitor its progress.

³ The design stage translates requirements into a blueprint of the processing functions that the system will perform to meet user needs. Details concerning system access controls, business and processing control procedures, and auditability requirements are incorporated in this stage of the system development life cycle.

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Significant Efforts Are Needed to Ensure That an Internet Web Site Refund Status Application Is Available by the Beginning of the 2002 Filing Season

Although the IRS has been planning to implement an Internet-based refund inquiry application since 1996, little detailed design or development work toward implementing it has been completed.

The Customer Communication (CC) Project is one of the first initiatives of the IRS' modernization program. As currently planned, the CC Project will be implemented in a two-phased release of functionality in FYs 2001 and 2002. The FY 2001 release will focus on improvements to the IRS' telephone operations, while the FY 2002 release will include web-access capability.

The IRS' attempts to modernize its complex computer systems historically have been delayed by various management and technical problems. Management officials from the IRS Customer Service function advised us that using the Internet to provide taxpayers with refund status information has been planned since 1996. During the past 4 years, the IRS has completed some high-level planning and analysis, but little detailed design or development work, toward implementing an Internet-based refund inquiry application. Progress has been limited because the IRS' resources have been consumed by other aspects of the overall modernization effort and because of organizational concerns with providing adequate security for taxpayer data on the Internet.

Although Internet access to refund status information was originally scheduled for implementation in FY 2001, the IRS now plans to include it in the FY 2002 release. The FY 2002 release is dependent on a number of projects, including the Security and Technology Infrastructure Release's (STIR) development of secure Internet applications. STIR is one of three Integrated Project Teams that have been initiated to design, build, and deploy the technical infrastructure required to support the Business Systems Modernization.

When we issued our draft report in November 2000, only 13 months remained before the beginning of the

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The IRS has substantial work to do if it is going to be able to provide taxpayers with refund status information on the Internet by the beginning of the 2002 Filing Season.

2002 Filing Season. Yet the Internet refund status application was still more a high-level concept than it was a work-in-progress. The development tasks that remain include:

- Analyzing and defining the business requirements and functional requirements of the refund application.
- Ensuring that the application meets all security and privacy requirements.
- Procuring any hardware, software, or contract services that are needed.
- Integrating/interfacing the web application with the modernized or legacy computer systems.
- Developing a risk management plan that identifies and prioritizes risks and details the methods for controlling the risks.
- Designing, programming, and testing the web application.

Although the states we visited were able to develop their web-based refund applications within an abbreviated development cycle of only 5 to 9 months, the IRS faces a bigger challenge due to the complexity of its computer systems and the scope of its modernization project.

Therefore, given the substantial amount of critical work that remains and the problems and delays that have accompanied the IRS' past modernization efforts, the delivery of an Internet-based refund status application by the 2002 target date may be at risk. The Security and Accreditation Process alone could require approximately 4 months to complete.

The IRS needs to ensure that the Internet Refund Inquiry Project is designed and developed so that sufficient time is available to ensure the system meets all requirements and is completed on time and within budget. The GAO stated in a May 2000 Exposure Draft entitled *Information Technology Investment – A Framework for*

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Assessing and Improving Process Maturity
(GAO/AIMD-10.1.23) that:

During the control phase the organization ensures that, as projects develop and as investment costs rise, the project is continuing to meet mission needs at the expected levels of cost and risk. If the project is not meeting expectations or if problems have arisen, steps are quickly taken to address the deficiencies.

Although it is late in the process, the Internet Refund Inquiry Project should now be moving from the concept phase to the design and development phases. Any further delays could jeopardize achievement of the 2002 target date.

Recommendations

To minimize the risk that the delivery of an Internet-based refund inquiry application could be delayed beyond the current 2002 target date, the Commissioner, Wage and Investment Division, needs to work with the Chief Information Officer to ensure that:

1. Detailed planning and development actions are started immediately.
2. The appropriate security requirements are designed into the system.
3. The progress of the design and development work is closely monitored to ensure that milestone dates are met and that any unforeseen problems or issues are promptly resolved.

Management's Response: Management's response was due on December 13, 2000. As of December 14, 2000, management had not responded to the draft report.

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Conclusion

An Internet-based application could improve customer service and provide a lower-cost alternative to responding to requests for refund status information.

The IRS' current method of responding to refund inquiries by telephone is costly and does not always provide an adequate level of service for taxpayers. Expanding the IRS' Internet web site to provide taxpayers with refund status information, as nine state governments have already done, would improve customer service to a growing segment of the population that demands interactive applications on the Internet. By diverting refund inquiries to the Internet, the IRS could potentially increase the level of service it provides on the toll-free telephone system by freeing up its Customer Service Representatives to answer more tax law and tax account-related questions from other taxpayers. An Internet-based refund application could also reduce the IRS' costs by lowering the overall demand for telephone assistance.

The IRS must act quickly if its plans to provide refund status information on the Internet by 2002 are to become a reality.

While some high-level planning has been accomplished, little detailed design or development work had been completed as of September 2000. To minimize the risk that the delivery of an Internet-based refund inquiry application could be delayed beyond the current 2002 target date, detailed planning and development actions need to be started immediately. In particular, the Commissioner, Wage and Investment Division, needs to work with the Chief Information Officer to:

- Ensure that the appropriate security requirements are incorporated into the design of the application.
- Closely monitor the progress of the development effort so that any unforeseen problems or issues that may be encountered can be promptly addressed and resolved.

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Appendix I

Detailed Objective, Scope, and Methodology

Our objective was to evaluate the plans and time frames that the Internal Revenue Service (IRS) has developed to implement an interactive Internet-based refund inquiry system.

To accomplish this objective, we:

- I. Evaluated the current IRS telephone-based refund inquiry system and reviewed the status of the IRS' plans to implement an Internet-based refund inquiry system.
 - A. Determined the components of the current IRS refund inquiry system.
 1. Determined the annual volume of refund inquiries received by the IRS by telephone.
 2. Identified the IRS' annual costs to provide toll-free telephone service for refund inquiries.
 3. Identified the results of any customer satisfaction surveys involving the IRS' current refund inquiry services.
 - B. Evaluated the status of the IRS' plans to implement an Internet-based refund inquiry system.
 1. Discussed the status of the development process and the time frames for implementation with Customer Service management.
 2. Reviewed the IRS' Modernization Plans to determine the methodology of implementing the system.
 3. Determined the estimated costs of providing an Internet-based refund inquiry system.
 4. Reviewed the minutes of the June 16, 2000, "Secure e-Communications Summit" sponsored by the Chief Information Officer and the Assistant Commissioner (Electronic Tax Administration), which covered secure messaging, the legal

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framework for e-Communications, industry and government best practices, and current and future technology.

- II. Identified the barriers the IRS must overcome before implementing an Internet-based refund inquiry system.
 - A. Interviewed Customer Service function management to discuss security risks, disclosure risks, funding issues, infrastructure requirements, and other barriers.
 - B. Researched the legal and policy framework for e-Communications (e.g., the Privacy Act,¹ the Paperwork Reduction Act,² the Computer Security Act of 1987,³ the Chief Financial Officers Act,⁴ the Federal Managers' Financial Integrity Act,⁵ the Clinger-Cohen Act,⁶ et al) and other applicable disclosure and security laws and guidelines (including the National Institute of Standards and Technology and the Internal Revenue Code⁷).
 - C. Interviewed an attorney from the IRS Office of the Chief Counsel who specializes in Internet security/disclosure issues.
 - D. Evaluated the methodology that Customer Service function management envisions for overcoming the barriers for implementation.
- III. Evaluated the Internet-based refund inquiry systems used by state governments.
 - A. Researched the Internet web sites of each state to identify those states that use an Internet-based refund inquiry system.

¹ 5 U.S.C. § 552a (1994)

² Pub. L. No. 104-13

³ Pub. L. 100-235

⁴ Pub. L. No. 101-576

⁵ Pub. L. No. 97-255

⁶ Pub. L. No. 104-106

⁷ 26 U.S.C. § 6103(a) and (b)

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- B. Visited two heavily populated states (California and New York) that use Internet-based refund inquiry systems and interviewed the state taxing authorities to:
 - 1. Determine how the Internet-based refund inquiry system is designed.
 - a) Identified the types of security measures that are used to prevent the illegal disclosure of tax information.
 - b) Identified the method and frequency of refund information updates.
 - 2. Determine the volume of Internet inquiries received per year since the inception of the system and the impact that the Internet-based service has had on the number of refund inquiries received by telephone.
 - 3. Determine the costs to develop and maintain the system.
 - 4. Identify the actions taken (i.e., “lessons learned”) to overcome any barriers encountered in developing and/or implementing the system.
 - 5. Determine the results of any customer satisfaction surveys or other types of customer feedback.
 - 6. Identify any other measures that are being used to evaluate the effectiveness and efficiency of the system.

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Appendix II

Major Contributors to This Report

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Appendix III

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